

## CLAIMS

1. A method of treating location data for a mobile telephone device (UE-i) which can move in geographical areas ( $C_j$ ) of a communication network, said 5 geographical areas ( $C_j$ ) being defined by sets of at least one location parameter, characterized in that it includes the following steps:
- i) detection of the geographical area ( $C_j$ ) in which said mobile telephone device (UE-i) is located at predetermined times,
  - ii) temporary storage of a set of location parameters representative of said 10 detected geographical area,
  - iii) analysis of said sets of location parameters stored at chosen intervals, and
  - iv) storage of each set of location parameters satisfying at least one chosen criterion.
- 15 2. A method according to claim 1, characterized in that said detection is periodic.
3. A method according to claim 1, characterized in that said analysis consists in determining all the sets of location parameters and then counting out each set of 20 location parameters, and in that each set of location parameters is stored in association with a number greater than a chosen threshold, said chosen criterion consisting of crossing said threshold to a value above said threshold.
- 25 4. A method according to claim 2, characterized in that said analysis consists in determining all the sets of location parameters and then counting out each set of location parameters, and in that each set of location parameters is stored in association with a number greater than a chosen threshold, said chosen criterion consisting of crossing said threshold to a value above said threshold.
- 30 5. A method according to claim 1, characterized in that said analysis consists in determining all the different sets of location parameters and then counting out each of said different sets of location parameters to determine their respective relative proportions, and in that each set of location parameters is stored in association with a proportion greater than a chosen threshold, said chosen criterion consisting in the crossing of said threshold to a value above said threshold.
- 35 6. A method according to claim 2, characterized in that said analysis consists in determining all the different sets of location parameters and then counting out each of said different sets of location parameters to determine their respective relative

proportions, and in that each set of location parameters is stored in association with a proportion greater than a chosen threshold, said chosen criterion consisting in the crossing of said threshold to a value above said threshold.

5        7. A method according to claim 1, characterized in that said detected geographical area is stored temporarily in corresponding relationship to at least its time of detection.

8. A method according to claim 2, characterized in that said detected geographical area is stored temporarily in corresponding relationship to at least its time of detection.

10      9. A method according to claim 1, characterized in that said set of location parameters is stored, after analysis, in corresponding relationship to chosen information.

15      10. A method according to claim 2, characterized in that said set of location parameters is stored, after analysis, in corresponding relationship to chosen information.

11. A method according to claim 7, characterized in that said information is representative of a time interval associated with each set of location parameters satisfying said chosen criterion.

20      12. A method according to claim 9, characterized in that said information is representative of a time interval associated with each set of location parameters satisfying said chosen criterion.

13. A method according to claim 1, characterized in that it includes an additional step in which a chosen status is associated with said stored sets of location parameters.

25      14. A method according to claim 13 in conjunction with claim 9, characterized in that said status association is effected automatically as a function of said information.

30      15. A method according to claim 13 in conjunction with claim 11, characterized in that said status association is effected automatically as a function of said information.

16. A method according to claim 13, characterized in that said status association is initiated by the user of said mobile telephone device (UE-i) by selecting a status from a set of statuses displayed on a screen of his mobile telephone device (UE-i).

35      17. A method according to claim 13, characterized in that said status is a field associated with an operating configuration of said mobile telephone device (UE-i).

18. A method according to claim 17, characterized in that said field is selected from the group including at least "Home", "Office" and "Other" fields.
19. A method according to claim 13, characterized in that said operating configuration is defined by the user of said mobile telephone device (UE-i).
- 5        20. A method according to claim 13, characterized in that at least two different sets of location parameters satisfying said criterion can be associated with the same status.
- 10      21. A method according to claim 1, characterized in that each set of location parameters includes at least one parameter representative of a network cell identifier.
- 10      22. A method according to claim 13, characterized in that each set of location parameters includes at least one parameter representative of a network cell identifier.
- 15      23. A method according to claim 21, characterized in that some sets of location parameters include at least one complementary parameter selected from the group including radio information representative of the received power of a base station (Node B) controlling said cell and/or the distance to the base station (Node B) controlling said cell.
- 20      24. A location data processing device (D) for a mobile telephone device (UE-i) which can move in geographical areas ( $C_j$ ) of a communication network defined by sets of at least one location parameter, characterized in that it includes processing means (M) adapted i) to determine the geographical area ( $C_j$ ) in which the mobile telephone device (UE-i) is located at predetermined times, and then to store temporarily a set of location parameters representative of said detected geographical area, and ii) to analyze said sets of location parameters stored at chosen intervals, in order to store each set of location parameters satisfying at least one chosen criterion.
- 25      25. A device according to claim 24, characterized in that said processing means (M) are adapted to effect said detection periodically.
- 30      26. A device according to claim 24, characterized in that said processing means (M) are adapted to effect said analysis on the basis of a determination of different sets of location parameters, followed by counting out each set of location parameters, and to store each set of location parameters in association with a number above a chosen threshold, said chosen criterion consisting in the crossing of said threshold to a value above said threshold.
- 35      27. A device according to claim 24, characterized in that said processing

means (M) are adapted to effect said analysis on the basis of determining different sets of location parameters followed by counting out of each of said different sets of location parameters to determine their respective relative proportions, and to store each set of location parameters in association with a proportion above a chosen threshold, said chosen criterion consisting in the crossing of said threshold to a value above said threshold.

28. A device according to claim 24, characterized in that said processing means (M) are adapted to store said detected geographical area temporarily in corresponding relationship to at least one detection time.

10 29. A device according to claim 24, characterized in that said processing means (M) are adapted to store said set of location parameters, after analysis, in corresponding relationship to chosen information.

15 30. A device according to claim 28, characterized in that said information is representative of a time interval associated with each set of location parameters satisfying said chosen criterion.

31. A device according to claim 29, characterized in that said information is representative of a time interval associated with each set of location parameters satisfying said chosen criterion.

20 32. A device according to claim 24, characterized in that said processing means (M) are adapted to associate said stored sets of location parameters with a chosen status.

33. A device according to claim 32 in conjunction with either claim 22 or claim 23, characterized in that said processing means (M) are adapted to effect said status association automatically as a function of said information.

25 34. A device according to claim 32, characterized in that said processing means (M) are adapted to effect said status association after selection by the user of said mobile telephone device (UE-i) of a status from a set of statuses displayed on a screen of the mobile telephone device (UE-i).

35. A device according to claim 32, characterized in that said status is a field associated with an operating configuration of said mobile telephone device (UE-i).

36. A device according to claim 35, characterized in that said field is selected from a group including at least "Home", "Office" and "Other" fields.

37. A device according to claim 32, characterized in that said operating configuration is defined by the user of said mobile telephone device (UE-i).

35 38. A device according to claim 32, characterized in that said processing

means (M) are adapted to associate at least two different sets of location parameters satisfying said criterion with the same status.

39. A device according to claim 24, characterized in that each set of location parameters includes at least one parameter representative of a network cell identifier.

5        40. A device according to claim 39, characterized in that some sets of location parameters include at least one additional parameter selected from a group including radio information representative of the receive power of a base station (Node B) controlling said cell and/or the distance to the base station (Node B) controlling said cell.

10      41. A mobile telephone device (UE-i) able to move in geographical areas (C<sub>j</sub>) of a communication network defined by sets of at least one location parameter, characterized in that it includes a processing device (D) according to claim 24.